an organic EL display device having a flat panel 40 which encapsulates an organic EL element 30 and is attached to a substrate 30.

Similar to the Applicants' Admitted Prior Art (AAPA) shown in FIG. 1, the sealing member 9 of Sakaguchi et al. has a cap structure, and therefore, unlike a flat panel structure of the present invention, "cannot satisfy a current trend toward a compact display device." (See paragraphs 13-15 of Applicants' application.) Furthermore, the sealing member 9 of Sakaguchi et al. is attached to the anode layer 2, and not attached to the substrate 1, as mistakenly noted by the Examiner. In another words, the sealing member 9 *does not encapsulate* an organic element, which comprises the anode layer 2, the light emitting layer 4 and the cathode 7. (See the anode layer 2 shown in FIG. 1 of Sakaguchi et al., which is exposed beyond the sealing member 9.)

In order for a document to anticipate a claim, the document must teach each and every element of the claim. See MPEP §2131. Accordingly, since Sakaguchi et al. does not teach the features recited in claims 1 and 19, as stated above, withdrawal of the § 102(a) rejection is earnestly solicited.

REJECTION UNDER 35 U.S.C. §103(a):

At pages 4 through 6 of the Office Action, claims 1, 5-9, 19 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Taniguchi et al. (US 5,239,228) in view of Strite (US 6,023,073). At pages 6 and 7 of the Office Action, claims 1, 3 and 4 were further rejected under 35 U.S.C. §103(a) over McKenna et al. (US 4,810,931) in view of Strite. Finally, at pages 7 and 8 of the Office Action, claims 1 and 2 were rejected under 35 U.S.C. §103(a) over Inohara et al. (US 4,357,557) in view of Strite. These rejections are respectfully traversed.

Inohara et al. appears to disclose an inorganic EL display device having a substrate 1, a first electrode layer 2 formed on the substrate 1, an inorganic EL thin film 4 and a second electrode 6 formed on the fist electrode layer 2, spacers 10 formed on the first electrode layer 2, and a counter substrate 11 formed on the spacers 10. (See FIG 1 of Inohara et al.) However, Inohara et al. fails to disclose many of the elements recited in claims 1 and 2, and is structurally different from that of the claims 1 and 2.

For example, in addition to failing to disclose an organic EL layer structure, as admitted by the Examiner, Inohara et al. fails to disclose or suggest an organic EL device having "*a flat*

panel which encapsulates said organic EL element and is attached to said substrate," as recited in claims 1 and 2. (Emphasis added.) In contrast, FIG. 1 of Inohara et al. discloses a counter substrate 11 which is attached to spacers 10 that are adhered to a first electrode layer 2. A careful review shows that a cap structure consisting of the counter substrate 11 and the spacers 10 also does not encapsulate the first electrode layer 2.

That is, Inohara et al. appears to be directed to an inorganic EL device structure, and consequently does not disclose or suggest an organic EL element having a lower electrode, an organic EL layer and an upper electrode, which are encapsulated by a flat panel, as shown and recited in Applicant's application. In other words, while the Examiner labels the first electrode layer 2, the inorganic EL thin film 4 and the second electrode 6 of Inohara et al. as an EL element, it is clear from FIG. 1 of Inohara et al. that the cap structure having the counter substrate 11 does not encapsulate the EL element, including the first electrode layer 2, and is not attached to the substrate 1. Finally, Applicants respectfully note that a hole provided to the counter substrate 11 in Inohara et al. is an injection hole 14 which allows a protective liquid 13 to flow therethrough, while a through hole of the present invention is "a passage which controls a pressure inside a space formed by a substrate and a flat panel prior to incorporation of a shutting cap." (See, for example, claim 5 of Applicants' application.)

McKenna et al. also fails to disclose or suggest the features of the present invention unaccounted for by Inohara et al. That is, McKenna et al. appears to be directed to a protective fill fluid which improves on a protective liquid of Inohara et al. Therefore, an inorganic EL display device of McKenna et al., like Inohara et al., is structurally different from an organic EL device of the present invention, as pointed out above. In addition, McKenna et al. discloses using a cover plate 22 having a cap like structure (See FIGS. 2-4) so as to avoid using spacers 10 between a counter substrate 11 and a substrate 1 (See FIG. 1). Applicants note that this is structurally different from a flat panel of the present invention, capable of satisfying a current trend toward a compact display device. Further structural and functional differences are illustrated by column 5, lines 30-32 of McKenna et al., which explicitly disclose providing "at least two fill holes 110 and 120" on the cover plate 22 for filling the protective fill fluid therethrough. In the present invention, a through hole of the flat panel is a passage which controls a pressure inside a space formed by a base substrate and the flat panel.

Finally, Taniguchi et al. appears to disclose an inorganic EL display device having a substrate 11, a lower electrode layer 12 formed on the substrate 11, an EL layer 14 and an

upper electrode 16 formed on the lower electrode layer 12, and a glass plate 51 attached to the lower electrode layer 12 via an adhesive 52. (See FIG. 10 of Taniguchi et al.) However, similar to Inohara et al. and McKenna et al., and in addition to failing to disclose an organic EL layer structure as admitted by the Examiner, Taniguchi et al. fails to disclose or suggest an organic EL device having "*a flat panel which encapsulates said organic EL element and is attached to said substrate*," where the organic EL element comprises a lower electrode, an organic EL layer and an upper electrode.

That is, while the Examiner labels the lower electrode layer 12, the EL layer 14 and the upper electrode 16 of Taniguchi et al. as an EL element and cites the glass plate 51 for encapsulating the EL element, again a careful review of FIG. 10 of Taniguchi et al. reveals that the glass plate 51 in fact does not encapsulate the lower electrode 12 of the purported EL element of Taniguchi et al. Rather, in Taniguchi et al., the lower electrode layer 12 is exposed beyond the glass plate 51, and the glass plate 51 is attached to the lower electrode layer 12 via the adhesive 52, and not attached to the substrate 11.

Applicants respectfully submit that Inohara et al., McKenna et al., and Taniguchi et al. are directed to an **inorganic** EL display device, **and not an organic** EL display device of the present invention. A broad disclosure by Strite that an organic EL display device may eventually replace an inorganic EL display device does not supplement the missing elements in Inohara et al., McKenna et al., and Taniguchi et al. Furthermore, Applicants respectfully note that the cited references themselves do not provide 1) a motivation to combine and 2) a reasonable expectation of success thereof, as required by the §103(a) rejection.

The Board has repeatedly held that a finding of obviousness requires that the prior art provide a motivation for one skilled in the art to make the necessary changes to the reference device. In other words, Applicants' disclosure may not be used as a basis for the motivation to combine or modify the prior art to arrive at the claimed invention. (See, e.g., In re Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. Pat. App. 1984) and MPEP §§ 2141-2142.) These findings were upheld *even where the references relied upon teach that all aspects of the claimed invention were individually known in the art*. (See, e.g., Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).)

While the Examiner appears to cast the present invention as a combination of old elements, for example, by replacing an inorganic EL layer of an EL element of Inohara et al., McKenna et al., or Taniguchi et al. with an organic EL layer of an organic EL element of Strite,

this leads to an improper analysis of the present invention by parts and not by the whole. This is well established in view of Custom Accessories, Inc. v. Jeffery-Allan Industries, Inc., 807 F.2d 955, 1 USPQ.2d 1196 (Fed. Cir. 1986).

The prior art must not only suggest the desirability that the teachings of references be combined, but must also suggest the desirability of the modification in the manner proposed by the Examiner as well as the result to be achieved. (See Diversitech v. Century Steps, 850 F.2d 675, 7 USPQ2d 1315 (Fed. Cir. 1988).) In the instant case, the Examiner cites Strite for disclosing an organic EL element having an anode 51, an organic EL layer 53 and a cathode 54. (See FIG. 5 of Strite). But Strite does not appear to disclose how this organic EL element is to be incorporated into an inorganic EL display device having an inorganic EL element of Inohara et al., McKenna et al., or Taniguchi et al.

In other words, an organic EL display device and an inorganic EL display device have very different structures, and accordingly, quite different fabrication technologies thereof. Applicants note that to even consider such a modification described above, complete new engineering decisions are required, which certainly are not supported by the disclosures of Strite, Inohara et al., McKenna et al., and Taniguchi et al. That is, an organic EL layer 53 of Strite (See FIG. 5) cannot simply replace, for example, an inorganic EL layer 14 of an inorganic EL element of Taniguchi et al. (See FIG. 10.), without necessarily changing and/or replacing the remaining elements of the inorganic EL element of Taniguchi et al., and consequently changing the entire inorganic display structure of Taniguchi et al.

Furthermore, Applicants respectfully note that the fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish prima facie obviousness, and *the teaching or suggestion to make the claimed combination and the reasonable expectation of success, must both be found in the prior art, and not based on applicants' disclosure*. (See MPEP § 2143.) In the instant case, the cited references do not meet the above requirements, and therefore, it is respectfully submitted that the 103(a) rejection cannot be supported in the instant case. That is, even if such a motivation exist, it appears that such a modification would require complete new engineering decisions, and the cited references certainly do not provide a reasonable expectation of success thereof.

It is also well established that the Examiner may not rely on general principles of engineering to fill in the gaps in the teaching of the cited references. (See Akzo v. Dupont, 810 F.2d 1148, 1 USPQ.2d 1704 (Fed. Cir. 1987).) Applicant respectfully submits that the cited

references do not disclose a motivation to combine, and a reasonable expectation of success of what is claimed in the present invention.

In view of the above, Applicants believe that independent claim 1 is patentably distinguishable over the cited references, and withdrawal of the § 103(a) rejection is respectfully requested. In addition, claims 2-9 and 19-20 are allowable at least due to their dependency on claim 1, as well as for the additional features recited therein, and withdrawal of the §103(a) rejection for these claims is also respectfully requested. For example, claim 5 has been amended to clarify, in part, "wherein said through hole is a passage which controls a pressure inside a space formed by...." Accordingly, a function and utility of the instant through hole is disclosed in the recitation, and not intended use of the through hole as suggested by the Examiner.

Finally, claims 21-28 are also patentably distinguishable over the cited references. That is, the cited reference do not disclose or suggest an organic EL display device having "a substrate; an organic EL element formed on said substrate...a flat panel which encapsulates said organic EL element and is attached to said substrate; at least one through hole formed in said **substrate**; and a through hole shutting cap...," (Emphasis added) as recited in claims 22-28, and similarly recited in claim 21 of Applicants' application. Applicants respectfully note that the cited reference do not disclose or suggest an organic EL display device having a through hole formed in the base substrate.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 2/26/03

By: _____
Charles Y. Park
Registration No. 50,709

700 Eleventh Street, NW, Suite 500
Washington, D.C. 20001
(202) 434-1500

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please AMEND the following claims:

1. (ONCE AMENDED) An organic electroluminescent (EL) display device comprising:

a substrate;

an organic EL element formed on said substrate, wherein said organic EL element comprises a lower electrode, an organic EL layer and an upper electrode that are sequentially stacked on said substrate;

a flat panel which encapsulates said organic EL element and is attached to said substrate;

at least one through hole formed in [said substrate and/or] said flat panel; and

a through hole shutting cap which shuts said through hole.

2. (UNAMENDED) The device of claim 1, wherein said through hole shutting cap comprises a curable agent.

3. (UNAMENDED) The device of claim 1, wherein said through hole shutting cap comprises a welding material.

4. (UNAMENDED) The device of claim 3, wherein the welding material includes one of indium (In) and lead (Pb).

5. (ONCE AMENDED) The device of claim 1, wherein said through hole <u>is a passage which</u> controls a pressure inside a space formed by said substrate and said flat panel prior to incorporation of said through hole shutting cap[, so as to prevent separation of a portion of said flat panel from said substrate].

6. (UNAMENDED) The device of claim 1, further comprising a moisture/water absorbing agent arranged at a location inside a space formed by said substrate and said flat panel so as to not shield light emitted from said organic EL element, wherein said moisture/water absorbing agent removes moisture/water from the space.

7. (UNAMENDED) The device of claim 6, wherein said flat panel includes a moisture/water absorbing agent reception groove which receives said moisture/water absorbing agent.

8. (UNAMENDED) The device of claim 6, wherein the location is a periphery region of said substrate so as to not shield the light emitted from said organic EL element.

9. (UNAMENDED) The device of claim 6, wherein the location is a periphery region of said flat panel so as to not shield the light emitted from said organic EL element.

19. (UNAMENDED) The device of claim 1, further comprising an adhesive which attaches said flat panel to said substrate.

20. (ONCE AMENDED) The device of claim 19, wherein said through hole is a passage which regulates pressure inside the organic EL display device prior to sealing of said through hole shutting cap to said through hole, and prevents non-uniform width and separation of said adhesive from said substrate [so as to inhibit an inflow of moisture into the organic EL display device].

Please ADD the following claims:

21. (NEW) The device of claim 1, wherein said through hole comprises:
a first through hole formed in said flat panel; and
a second through hole formed in said substrate.

22. (NEW) An organic electroluminescent (EL) display device comprising:
a substrate;
an organic EL element formed on said substrate, wherein said organic EL element comprises a lower electrode, an organic EL layer and an upper electrode that are sequentially stacked on said substrate;
a flat panel which encapsulates said organic EL element and is attached to said substrate;

at least one through hole formed in said substrate; and

a through hole shutting cap which shuts said through hole.

23. (NEW) The device of claim 22, wherein said through hole is a passage which controls a pressure inside a space formed by said substrate and said flat panel prior to incorporation of said through hole shutting cap.

24. (NEW) The device of claim 22, wherein said through hole comprises:

a first through hole formed in said substrate; and

a second through hole formed in said flat panel.

25. (NEW) The device of claim 22, further comprising an adhesive which attaches said flat panel to said substrate.

26. (NEW) The device of claim 22, further comprising a moisture/water absorbing agent arranged at a location inside a space formed by said substrate and said flat panel so as to not shield light emitted from said organic EL element, wherein said moisture/water absorbing agent removes moisture/water from the space.

27. (NEW) The device of claim 26, wherein said flat panel includes a moisture/water absorbing agent reception groove which receives said moisture/water absorbing agent.

28. (NEW) The device of claim 26, wherein the location is a periphery region of said substrate or said flat panel so as to not shield the light emitted from said organic EL element.